

Inventor: ROBERT A. COHEN ET AL

Attorney Docket: US 010718

Title: METHOD FOR EFFICIENTLY STORING THE TRAJECTORY OF TRACKED OBJECTS IN VIDEO

Contact: Russell Gross 914) 333-9631

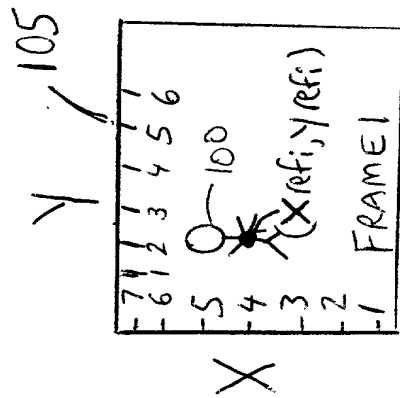


Fig. 1A

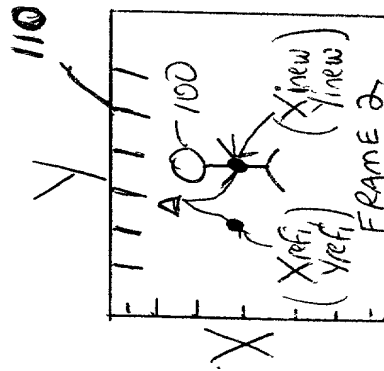


Fig. 1B

$$IS: \\ ||(X_{new}, Y_{new}) - (X_{ref}, Y_{ref})||^2 \geq \epsilon?$$

Fig. 1C

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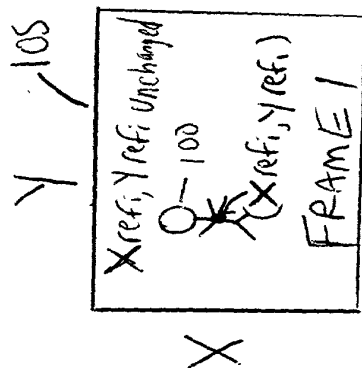


Fig. 2A

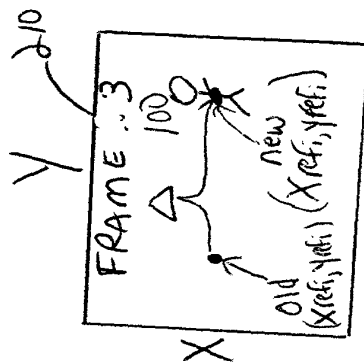


Fig. 2B

STORE NEW X_{ref}, Y_{ref} from Fig. 2B
as the reference coordinates

Fig. 2C

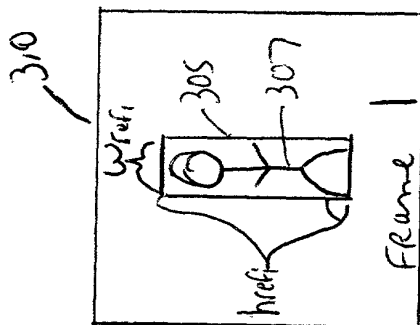


Fig. 3A

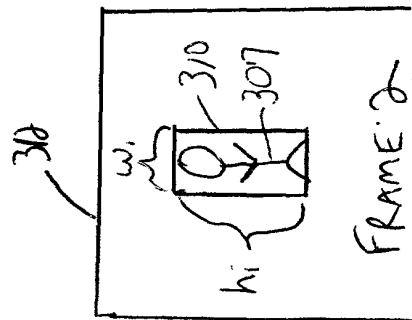


Fig. 3B

STORE
COORDINATES
OF FRAME 2 if:

1. $|w_1 - w_{ref1}| > \delta w$, OR
2. $|h_1 - h_{ref1}| > \delta h$, OR
3. The area of 305 is different than area of 310 by ϵ

Fig. 3C

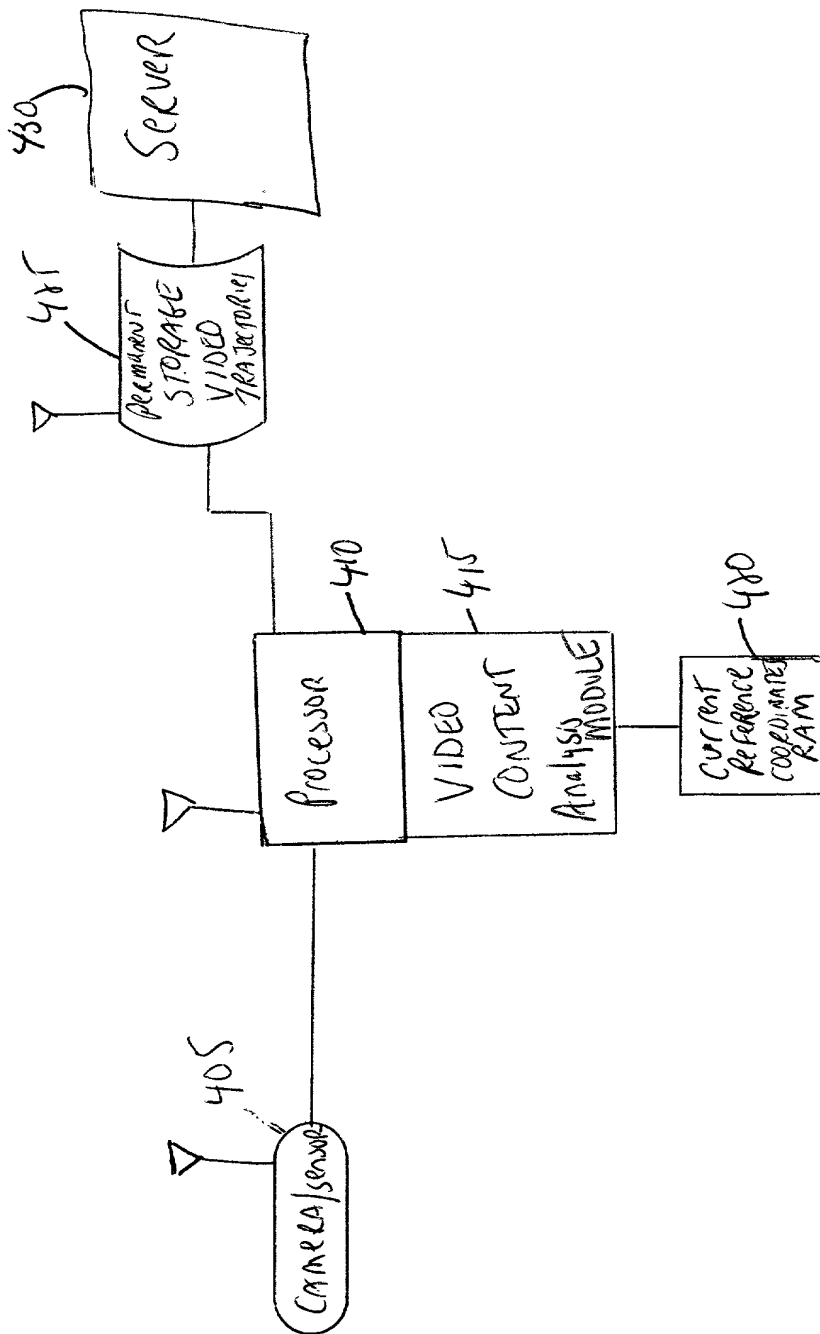


Fig. 4

FIG. 5A

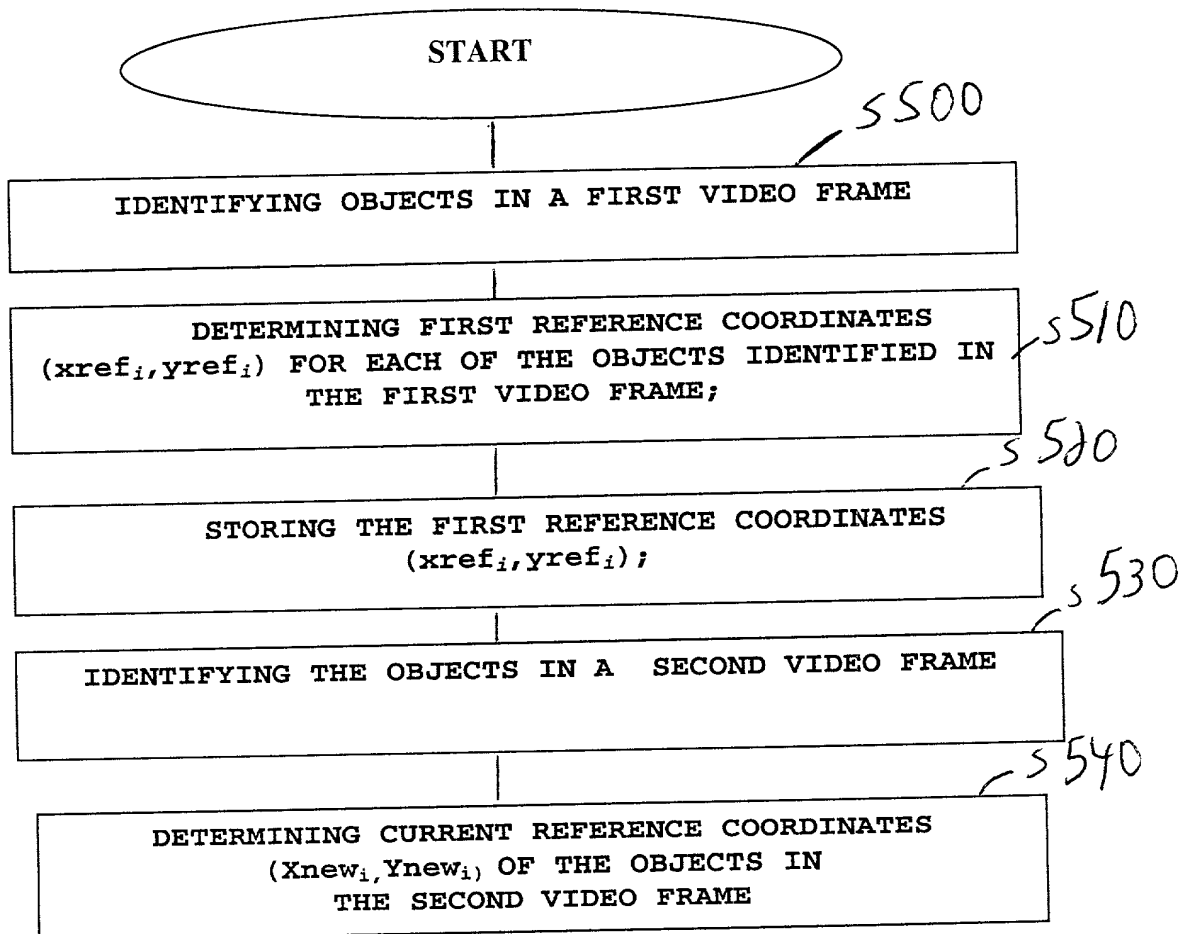


FIG. 5B

550

(f) storing the current reference coordinates of a particular object in an object trajectory list and replacing the first reference coordinates $(xref_i, yref_i)$ with the current reference coordinates $(xnew_i, ynew_i)$ if the following condition for the particular object is satisfied:

$$\| (xnew_i, ynew_i) - (xref_i, yref_i) \|^2 \geq \varepsilon,$$

wherein ε is a predetermined threshold amount, and

retaining the first reference coordinates $(xref_i, yref_i)$ for comparison with subsequent video frames when said condition in step (f) is not satisfied.

END

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